IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/574,170   :   PATENT APPLICATION

In re application of: :
    BRUNO BOZIONEK ET AL.

Filed: January 10, 2007   :   **METHOD FOR PROVIDING**
                                           PERFORMANCE CHARACTERISTICS

Examiner: Kevin S. Mai   :   **ON DEMAND**

Group Art Unit: 2456   :

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<u>**REPLY BRIEF**</u>

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I.   Rejection of Claims 24-29, 31-32, 44-51 as Obvious in View of U.S. Patent Application Publication No. 2004/0158644 to Albuquerque et al.

A.   Claims 24-29, 31-34, And 44-47 Are Allowable

Claim 24 defines a method that includes triggering a bandwidth test. The bandwidth test comprises sending a bandwidth request to each terminal, registering a bandwidth of an associated part connection after each hop and receiving assembled data relating to bandwidth available for each terminal. Claims 25-29, 31-34 and 44-47 depend directly or indirectly from claim 24 and therefore also contain these limitations.

1.   The Cited Art Does Not Teach Or Suggest Bandwidth Tests

The cited prior art does not teach or suggest any bandwidth test that involves sending a bandwidth request to each terminal, registering a bandwidth of an associated part connection after each hop and receiving assembled data relating to bandwidth available for each terminal as required by claims 24-29, 31-34 and 44-47. In the Examiner's Answer, the Examiner states that paragraph 66 of Albuquerque et al. discloses bandwidth testing that involves an evaluation of the flow on a particular link for a particular terminal. (Examiner's Answer, at 21). However, no portion of the Albuquerque et al. or any other cited art teaches or suggests the bandwidth test required by claims 24-29, 31-34 and 44-47.

Claim 24 explicitly requires "triggering a bandwidth test, the bandwidth test comprising sending a bandwidth request to each terminal, registering a bandwidth of an associated part connection after each hop and receiving assembled data relating to bandwidth available for each terminal." Albuquerque et al. merely suggests continuous monitoring by an access point for a terminal to which the access point is servicing. This is not performing the bandwidth test required by claim 24. The Examiner implicitly recognizes this fact in the Examiner's Answer.

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At page 21 of the Examiner's Answer, the Examiner states that "since it is able to identify the link speed it is seen to do perform bandwidth tests." The bandwidth manager, however, does not do any determining of bandwidth. It merely receives flow rate measurements from a flow registration unit (FR). (Albuquerque et al., ¶ 37).

There is no "registering a bandwidth of an associated part connection after each hop" taught or suggested by Albuquerque et al. The registering of a bandwidth after each hop requires a test to be run that passes through all the links through which data may be transmitted from one terminal to the device to which that terminal is communicating. The bandwidth manager of Albuquerque et al. is merely monitoring a particular flow experienced by a terminal at the end of a link. There is no registering of different bandwidth availability of each hop of a connection for the terminal disclosed or otherwise suggested by the cited art.

2.   The Cited Art Does Not Teach Or Suggest Bandwidth Requests Sent To Terminals

The system disclosed by Albuquerque et al. does not disclose any bandwidth request being sent to any terminals. Instead, bandwidth requests are transmitted by terminals to an access point. For example, flow registration units FRs send such data to the access point. (Albuquerque et al., ¶¶ 36-37). The access point then utilizes a bandwidth manager to allocate bandwidth for that terminal.   (*Id.* at ¶¶ 27-32).

In the Examiner's Answer, the Examiner makes clear that he is suggesting that the system disclosed by Albuquerque et al. be modified to read on the requirement that bandwidth requests be sent to terminals. The proposed modification of the Albuquerque et al. reference is improper since it would change the principle of operation of the prior art invention being modified. MPEP § 2143.01.

Albuquerque et al. explicitly requires access points to request bandwidth, not terminals. In fact, the removal of such an element that the prior art identifies as necessary is an indicia of the non-obviousness of the pending claims. *See In re Edge*, 359 F.2d 896, 149 U.S.P.Q. 556 (CCPA 1966).

3. The Cited Art Does Not Teach Or Suggest Any Bandwidths Of Associated Part Connections Being Registered After Each Hop

Albuquerque et al. also do not disclose or suggest any bandwidths of associated part connections being registered after each hop The only registrations of bandwidth disclosed by Albuquerque et al. is the maintenance of a registration table via flow registration units FRs that operate from a plurality of terminals. (Albuquerque et al., ¶¶ 33, 37, Table 2). The bandwidth manager BM may also manage such a reservation table. *Id.* at ¶ 42. None of these bandwidth registrations are registrations of bandwidth of associated part connections being registered. To the contrary, this is only a reservation of bandwidth required by flows experienced by a particular terminal from a utilization of a full connection, such as a link. *Id.* at ¶ 42. There is no bandwidth of part connections being registered after each hop in a particular connection path taught or suggested by the cited art.

In The Examiner's Answer, the Examiner asserts that paragraph 32 of Albuquerque et al. disclose such registrations after each hop of a connection for a terminal. (Examiner's Answer, at 23). However, paragraph 32 merely discloses an access system, which includes a bandwidth manager BM and flow registration units FR that operate from the terminals. "The BM monitors the available bandwidth in the network 150 and reserves bit rate bandwidths for flows. The FRs accept or deny the admission of new flows into the network 150." (Albuquerque et al., ¶ 33).

Paragraphs 32 and 33 of Albuquerque et al. merely make clear that no registration of available bandwidth for different hops in a connection occurs. Moreover, these paragraphs

further corroborate the fact that the system disclosed by Albuquerque et al. requires the terminals, or flow registration units FRs to communicate an experienced flow rate to the bandwidth manager and that no bandwidth requests are sent for conducting any testing as required by the pending claims.

4. The Cited Art Does Not Teach Or Suggest Any Assembly Of Data Relating To Bandwidths Available For Each Terminal

Albuquerque et al. only disclose an access point that "calculates if there is enough bandwidth available in the network." (Office Action, at 6). There is no receiving of any assembled data relating to bandwidth available for each terminal as part of a bandwidth test disclosed or otherwise suggested in the cited prior art.

The Examiner again cites to paragraph 32 of Albuquerque et al. as teaching or suggesting such a requirement. (Examiner's Answer, at 23). To the contrary, this paragraph merely states that an AC system includes a bandwidth manager operating from an access point and one or more flow registration units operating from a plurality of terminals. The flow registration units perform flow registration to the bandwidth manager of the access point by communicating the flow rate experienced by the terminals of the flow registration units. There is no receiving any assembled data relating to bandwidth available for each terminal as part of a bandwidth test. (Albuquerque et al., ¶¶ 36-37). In fact, there is no assembled data, such as the bandwidth availability at each hop. Instead, there is just a report of an experienced flow at a particular link for a terminal.

C. Claims 48-52 Are Allowable

Claim 48 requires a computer to include a network resource test device connected to at least one of the network resource allocation device, the performance characteristic providing device, and the network resource distribution memory. The network resource test device is

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configured to oversee a bandwidth test, the bandwidth test comprising sending a bandwidth request to each terminal, registering a bandwidth of an associated part connection after each hop in a communication path between each terminal and the computer, and receiving assembled data relating to bandwidth available for each terminal via the associated part connections in each communication path.

The cited art does not teach or suggest a network resource test device as required by claims 48-52. As discussed above with reference to claim 24, none of the cited art teaches or suggests any running of any bandwidth test. Nor does the cited art teach or suggest a network resource test device configured to oversee such a test or a bandwidth test that includes registering a bandwidth of an associated part connection after each hop in a communication path between each terminal and the computer, and receiving assembled data relating to bandwidth available for each terminal via the associated part connections in each communication path. It is respectfully requested that the rejection of claims 48-52 be reversed.

D.   **Claim 54 Is Allowable**

Claim 54 defines a method for substantially real time transmission of a software component that includes the step of if the computed amount of available bandwidth resources is equal to or greater than an amount of bandwidth necessary to transmit the software component to the requesting terminal, reducing the at least one lower priority process such that the at least one lower priority process is still able to utilize some bandwidth and transmitting the software component to the requesting terminal.

None of the cited art teaches a reduction of a lower priority process such that that one or more lower priority processes are still operational. Indeed, the cited art teaches away from such a limitation. For example, Albuquerque et al. teach that any lower priority process be eliminated

or rejected in the event a higher priority process requires all the bandwidth being used by that or reserved for that process to be released. (Albuquerque et al., ¶ 46, Figure 5).

The Examiner contends that the use of some bandwidth that may generally be available as part of a best effort mode reads on claim 54 (Examiner's Answer, at 25). To the contrary, all of the bandwidth allocated to that process is removed by the cited prior art and the "best effort" mode relied upon by the Examiner. The cited art fails to teach a reduction of bandwidth such that the lower priority process still uses some bandwidth as required by claim 54.

The cited art alone or in any combination fails to teach or suggest all the limitations of claim 54. It is respectfully requested that the rejection of claim 54 be reversed.

II. Rejection of Claims 33-34 as Obvious in View of The Combination of Albuquerque et al. And U.S. Patent Application Publication No. 2003/0097443 to Gillett et al.

Claims 33-34 depend directly from claim 31 and indirectly from claims 29, 27, 26, 25 and 24. These claims are at least allowable because the claims from which they depend are allowable as discussed above. Further, the cited art does not teach or suggest any of the requirements of claims 33 or 34.

A. Claim 33 Is Independently Allowable

Claim 33 includes the requirement that the claimed method include generating a load request in response to the temporary rejection of the load request. In the Examiner's Answer, the Examiner construes the transferring of a request between servers taught at paragraph 59 of Gillett et al. to be the generation of a load request. (Examiner's Answer, at 26). A transfer, or redirection, is not a generation of a load request. It is merely forwarding a previously generated request.

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Claim 33 also includes the limitations of claim 31, which requires that the temporary rejection be in a message sent to requesting terminal. The temporary rejection of claim 33 is a temporary rejection issued to a requester in a message sent to the requester. No such rejection is taught by Gillett et al. in paragraph 59. When a request is transferred by a server to another server as taught in paragraph 59 of Gillett et al., no such message is sent to the requesting terminal issuing any temporary rejection. Therefore, Gillett et al. further fails to teach or suggest any sending of a temporary rejection to a requesting terminal.

The cited art fails to teach the limitations of claim 33. Claim 33 is allowable over the cited art.

B. Claim 34 Is Independently Allowable

Claim 34 includes the limitation that a permanent rejection be generated after a plurality of temporary rejections have been generated for a load request or after determining that the amount of a bandwidth necessary to transmit the software component is greater than a maximum available bandwidth. As with claim 33, the Examiner admits that Albuquerque et al. do not teach or suggest this limitation. (Office Action, at 20). Instead, the Examiner relies on paragraph 59 of Gillett et al. to reject claim 34. (Office Action, at 20).

The Examiner claims that a transfer of a request to different servers is the issuance of a number of different temporary rejections and that a request that is ultimately rejected by a server is a permanent rejection. Essentially, the Examiner has used the same rationale used to reject claim 33. (Office Action, at 20; Examiner's Answer at 26 and 27). As noted above with respect to claim 33, Gillett et al. do not teach any temporary rejections nor such rejections being sent to a requester in a message. To the contrary, no such rejection is ever offered or provided to a

requester when a server disclosed by Gillett et al. transfers a request to a different server. This is not a temporary rejection as required by claim 34, let alone a plurality of temporary rejections.

Nor does Gillett et al. teach or suggest the issuance of any permanent rejection that is issued after a plurality of temporary rejections have been issued. As discussed above, Gillett et al. do not teach or suggest a plurality of temporary rejections being issued.

The cited combination of art fails to teach or suggest all the limitations of claim 34. Claim 34 is therefore allowable. It is respectfully requested that the rejection of claim 34 be reversed.

CONCLUSION

For at least the above reasons, reversal of the rejection of claims 24-29, 31-34, 44-52 and 54 and allowance of these claims are respectfully requested.

Respectfully submitted,

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